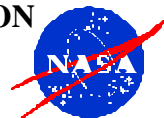


**LAND USE CONTROL IMPLEMENTATION PLAN****NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
KENNEDY SPACE CENTER
BREVARD COUNTY, FLORIDA**

FACILITY: Hypergol Support Building
Solid Waste Management Unit No. 65
CONTAMINANTS: VOCs and Metals in Groundwater
CONTROL: Prohibit Groundwater Use

**PURPOSE OF LAND USE CONTROL
IMPLEMENTATION PLAN**

This Land Use Control Implementation Plan (LUCIP) has been prepared to inform current and potential future users of the Hypergol Support Building (HSB) of institutional controls that have been implemented at the site¹. Although there are no current unacceptable risks to human health or the environment associated with the HSB, institutional land use controls (LUCs) are necessary to prohibit the use of groundwater from the site. Controls will include periodic inspection, condition certification and agency notification.

**WHY LAND USE CONTROLS ARE
NEEDED**

Human health and ecological risk assessments were completed as part of a Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI). Chemicals of concern identified for human health risk during the RFI that exceeded Florida Department of Environmental Protection (FDEP) and Environmental Protection Agency (EPA) cleanup target

levels were volatile organic compounds (VOCs) and metals in groundwater.

SITE DESCRIPTION

The HSB site is a NASA-operated facility that includes a one-story building (approximately 5,400 ft²); Office trailers, parking areas, and an above ground cable tray that extends to the Spacecraft Assembly and Encapsulation Facility #2 (M7-1210). The facility covers approximately one-half acre. During the 1960s, the HSB was used for hazardous liquid operations during the Apollo Space Program. Currently, the HSB is used as a support center for the Hypergol Module Processing Facilities.

SITE LOCATION

The HSB site is located in the Hypergol/Payload Test Area in the southeastern corner of the KSC Industrial Area (Figure 1). It is located at the intersection of Sixth Avenue S.E. and G Avenue S.E. The site is bounded by Sixth Avenue and Building M7-1011 to the north; G Avenue and borrow ponds to the east; and undeveloped land immediately to the south

1. This LUCIP summarizes institutional controls regarding the NASA KSA Hypergol Support Building (HSB). For detailed information on the site, consult the HSB administrative file, which is available for review by contacting the KSC Environmental Program Office at telephone number (321) 867-8411.

and west. A new building is currently being constructed west of the HSB site. The site is located within Section 4 of Township 23S, Range 37E which is in the Orsino Quadrangle. The groundwater use control area covered by the LUCIP is shown on Figure 2. Coordinates of the corners of the LUC are provided in Figure 2 in the State Plane Coordinate System NAD 1983 meters, Florida East.

SITE CONTAMINATION AND CONTROL

Groundwater at the site contains VOCs and metals above FDEP's groundwater cleanup target levels. Groundwater contamination is limited to the south and southeastern portions of the site. Metals were present above regulatory criteria in 1997 samples; however, only iron was present above regulatory criteria in 1999 samples. The LUCs are required to prohibit the use of groundwater. Indoor air quality shall be evaluated prior to any construction within the groundwater use control area.

DECISION DOCUMENT

A Statement of Basis (SB) establishes institutional controls as a component of the remedy for this site. The SB for the site, KSC document number KSC-TA-5679, is available for review by contacting the KSC Environmental Program Office at telephone number (321) 867-8411.

IMPLEMENTATION

Institutional controls will be implemented by the KSC Environmental Program Office in accordance with their RCRA permit and a Land Use Control Assurance Plan included in a Memorandum of Agreement (MOA)² between NASA, FDEP, and EPA, effective February 23, 2001. Upon approval of this LUCIP, it will be incorporated into the permit by reference. Property transfer (if conducted in the future) will be conducted in accordance with Section X of the MOA.

KSC's Environmental Program Office will provide KSC's Master Planning Office with survey coordinates of the LUCs. Restrictions will specify limitations in development and reuse for the area for as long as LUCs are necessary to protect human health and the environment.

MONITORING

Quarterly inspections to monitor that institutional controls specified herein are in place and operating will be conducted by KSC's Environmental Program Office. The inspection will verify that no groundwater use is occurring.

2. By separate MOA effective February 23, 2001, with the EPA and FDEP, KSC, on behalf of NASA, agreed to implement Center-wide, certain periodic site inspection, condition certification, and agency notification procedures designed to ensure the maintenance by Center personnel of any site-specific LUCs deemed necessary for future protection of human health and the environment. A fundamental premise underlying execution of that agreement was that through the Center's substantial good faith compliance with the procedures called for herein, reasonable assurances would be provided to EPA and FDEP as to the permanency of those remedies which included the use of specific LUCs.

Although the terms and conditions of the MOA are not specifically incorporated or made enforceable herein by reference, it is understood and agreed by NASA KSC, EPA and FDEP that the contemplated permanence of the remedy reflected herein shall be dependent upon the Center's substantial good faith compliance with the specific LUC maintenance commitments reflected herein. Should such compliance not occur or should the MOA be terminated, it is understood that the protectiveness of the remedy concurred in may be reconsidered and that additional measures may need to be taken to adequately ensure necessary future protection of human health and the environment.

REPORTING

KSC's Environmental Program Office will submit annual reports to EPA and FDEP certifying retention of the implemented LUCs.

ENFORCEMENT

KSC's Environmental Program Office will be responsible for stopping any activities at KSC that are not compliant with this LUCIP.

MAINTENANCE

The LUCIP shall remain in place until a land use change is implemented and the concerns managed by the LUCIP are mitigated; or there is a discovery, based upon analytical evidence, that scenarios managed by the LUCIP are no longer a concern. Any change in LUC management must be approved by the EPA and FDEP and implemented by modification of NASA's operating permit.

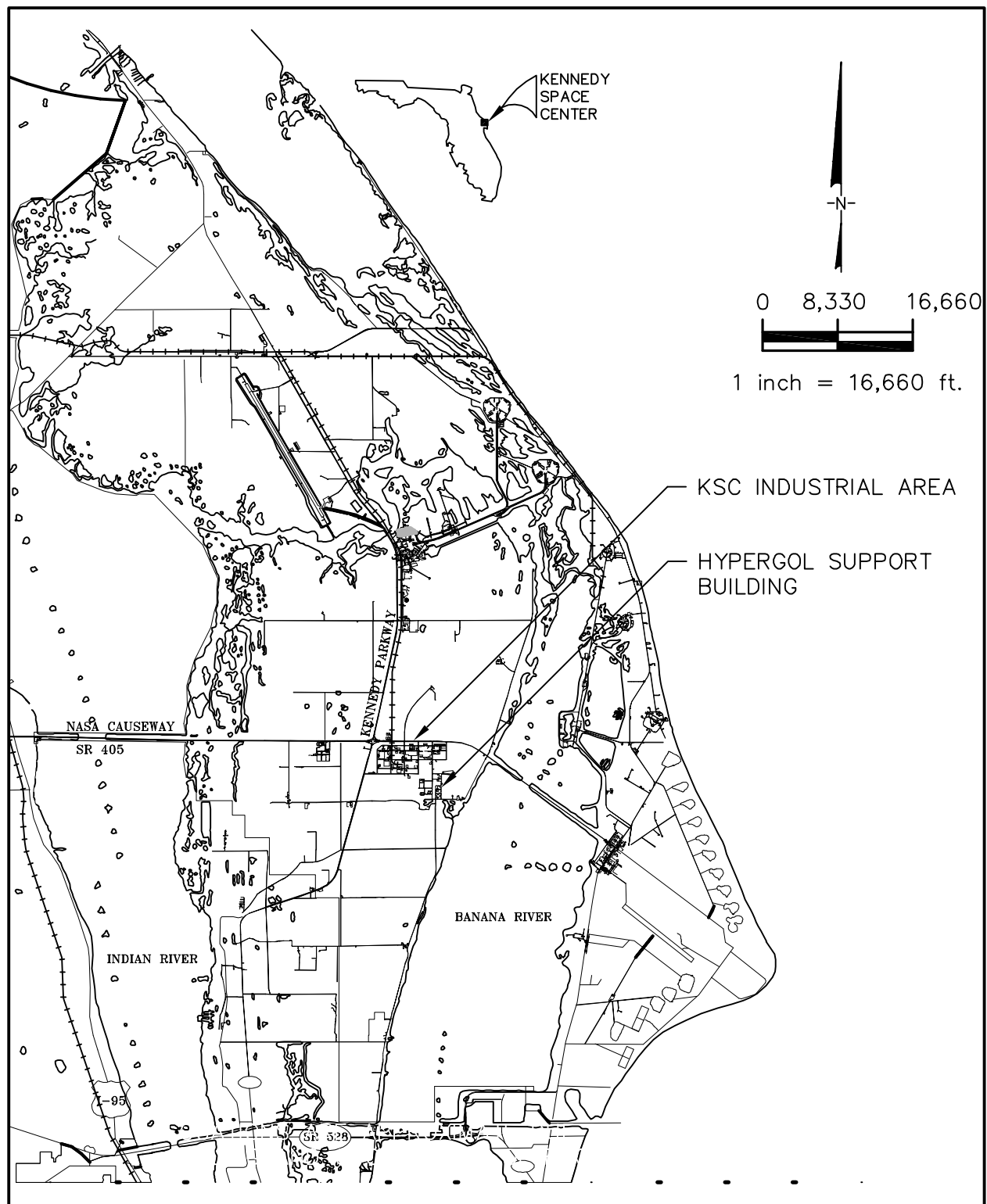
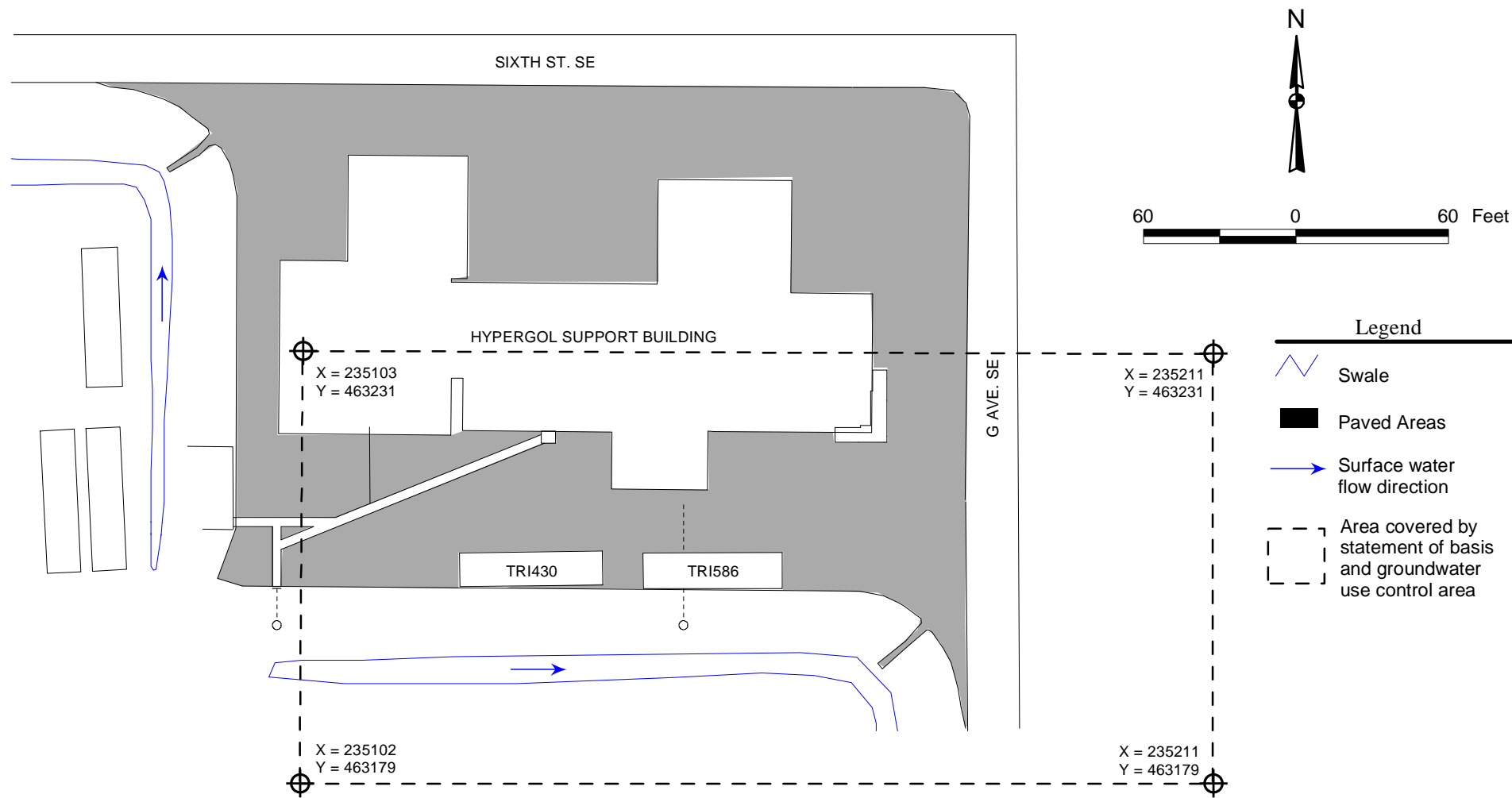


FIGURE 1
KENNEDY SPACE CENTER
HYPERGOL SUPPORT BUILDING SITE LOCATION MAP



Notes:
1. Survey coordinates are in State Plane Coordinate System NAD 1983 meters, Florida East

Figure 2
Site Map
Hypergol Support Building